JC03 Rec'd PCT/PTO 1 6 FEB 2001

SEQUENCE LISTING

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gac Asp	tct Ser	999 Gly 435	gat Asp	aaa Lys	gaa Glu	aag Lys	aaa Lys 440	cag Gln	att Ile	aca Thr	act Thr	tca Ser 445	cct Pro	atc Ile	act Thr	1344
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cat His	att Ile	aaa Lys 679	s Lev	g act ı Thi	gac Asp	ttt Phe	ggc Gly 680	/ Let	tgo LCys	act Thi	ggo Gly	Phe 685	: Arc	tgg Trp	g aca Thr	2064

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					cga Arg											2496
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						agc Ser									gtg Val 960	2880
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Ser Gly Ser Gly Ile Ala Ala Phe Ala Gln Ala His Pro Ser Asn Gly 50 . 55 60

Gln Arg Val Asn Pro Pro Pro Pro Gln Val Arg Ser Val Thr Pro 65 70 75 80

Pro Pro Pro Pro Arg Gly Gln Thr Pro Pro Pro Arg Gly Thr Thr Pro 85 90 95

Pro Pro Pro Ser Trp Glu Pro Ser Ser Gln Thr Lys Arg Tyr Ser Gly
100 105 110

Asn Met Glu Tyr Val Ile Ser Arg Ile Ser Pro Val Pro Pro Gly Ala 115 120 125

Trp Gln Glu Gly Tyr Pro Pro Pro Pro Leu Thr Thr Ser Pro Met Asn 130 135 140

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Gln	Pro	Ile	Ile	Met 165	Gln	Ser	Thr	Ser	Lys 170	Phe	Asn	Phe	Thr	Pro 175	Gly
Arg	Pro	Gly	Val 180	Gln	Asn	Gly	Gly	Gly 185	Gln	Ser	Asp	Phe	Ile 190	Val	His
Gln	Asn	Val 195	Pro	Thr	Gly	Ser	Val 200	Thr	Arg	Gln	Pro	Pro 205	Pro	Pro	Tyr
Pro	Leu 210	Thr	Pro	Ala	Asn	Gly 215	Gln	Ser	Pro	Ser	Ala 220	Leu	Gln	Thr	Gly
Ala 225	Ser	Ala	Ala	Pro	Pro 230	Ser	Phe	Ala	Asn	Gly 235	Asn	Val	Pro	Gln	Ser 240
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Ala 305	Ser	His	Ser	Ala	Asn 310	Ser	Gln	Pro	Ser	Ala 315	Thr	Thr	Val	Thr	Ala 320
Ile	Thr	Pro	Ala	Pro 325	Ile	Gln	Gln	Pro	Val 330	Lys	Ser	Met	Arg	Val 335	Leu
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Pro	Gln	Pro 355	Val	Gln	Thr	Val	Gln 360	Pro	Thr	Pro	Phe	Ser 365	Glu	Gly	Thr
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Val Leu Leu Arg Thr Gly Tyr Thr Gln Leu Cys Asp Trp Trp Ser Val Gly Val Ile Leu Cys Glu Met Leu Val Gly Gln Pro Pro Phe Leu Ala 770 Gln Thr Pro Leu Glu Thr Gln Met Lys Val Ile Ile Trp Gln Thr Ser Leu His Ile Pro Pro Gln Ala Lys Leu Ser Pro Glu Ala Ser Asp Leu 805 Ile Ile Lys Leu Cys Arg Gly Pro Glu Asp Arg Leu Gly Lys Asn Gly Ala Asp Glu Ile Lys Ala His Pro Phe Phe Lys Thr Ile Asp Phe Ser 840 Ser Asp Leu Arg Gln Gln Ser Ala Ser Tyr Ile Pro Lys Ile Thr His 855 Pro Thr Asp Thr Ser Asn Phe Asp Pro Val Asp Pro Asp Lys Leu Trp 875 Ser Asp Gly Ser Glu Glu Glu Asn Ile Ser Asp Thr Leu Ser Gly Trp Tyr Lys Asn Gly Lys His Pro Glu His Ala Phe Tyr Glu Phe Thr Phe Arg Arg Phe Phe Asp Asp Asn Gly Tyr Pro Tyr Asn Tyr Pro Lys Pro Ile Glu Tyr Glu Tyr Ile His Ser Gln Gly Ser Glu Gln Gln Ser Asp 935 Glu Asp Asp Gln His Thr Ser Ser Asp Gly Asn Asn Arg Asp Leu Val

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ccc Pro	agg Arg	aat Asn	gag Glu	cag Gln 85	att Ile	gtg Val	cga Arg	gtc Val	atc Ile 90	aag Lys	cag Gln	acc Thr	tcc Ser	cca Pro 95	gga Gly	288
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tat gg Tyr Gl															1248
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ctg tg Leu Cy		Ser													1344
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Tyr Gln Lys Gly Asn His Met Arg Gln Asp Ser Met Glu Pro Gly Asp

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Leu Trp Asp Asp Val Ser Asn Cys Arg Cys Gly Asp Arg Leu Lys Thr 740 745 750

Leu Glu Gln Arg Ala Gln Lys Gln His Gln Arg Cys Leu Ala His Ser 755 760 765

Leu Val Gly Thr Pro Asn Tyr Ile Ala Pro Glu Val Leu Leu Arg Lys
770 775 780

Gly Tyr Thr Gln Leu Cys Asp Trp Trp Ser Val Gly Val Ile Leu Phe 785 790 795 800

Glu Met Leu Val Gly Gln Pro Pro Phe Leu Ala Pro Thr Pro Thr Glu 805 810 815

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Cys Ala Ala Asp Cys Arg Leu Gly Arg Asp Gly Ala Asp Asp Leu Lys 850 855 860

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Glu Ser Ala Lys Ala Trp Asp Thr Leu Ala Ser Pro Ser Ser Lys His 915 920 925

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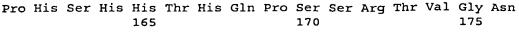
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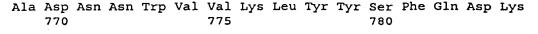
Val Val Gln Gln Gln Gln Ala Ala Ala Ala His Gln Gln Gln 420 425 430

His Gln His Gln Gln Ser Lys Pro Pro Thr Pro Thr Pro Pro Leu
435 440 445

Val Gly Leu Asn Ser Lys Pro Asn Cys Leu Glu Pro Pro Ser Tyr Ala 450 455 460

Lys Ser Met Gln Ala Lys Ala Ala Thr Val Val Gln Gln Gln Gln Gln 465 475 Gln Gln Gln Gln Gln Val Gln Gln Gln Gln Val Gln Gln Gln Gln 490 Gln Gln Gln Gln Gln Leu Gln Ala Leu Arg Val Leu Gln Ala Gln Ala Gln Arg Glu Arg Asp Gln Arg Glu Arg Glu Arg Asp Gln Gln Lys Leu Ala Asn Gly Asn Pro Gly Arg Gln Met Leu Pro Pro Pro Tyr Gln Ser Asn Asn Asn Asn Ser Glu Ile Lys Pro Pro Ser Cys Asn 550 Asn Asn Asn Ile Gln Ile Ser Asn Ser Asn Leu Ala Thr Thr Pro Pro 570 Ile Pro Pro Ala Lys Tyr Asn Asn Ser Ser Asn Thr Gly Ala Asn 580 585 Ser Ser Gly Gly Ser Asn Gly Ser Thr Gly Thr Thr Ala Ser Ser Ser 600 Thr Ser Cys Lys Lys Ile Lys His Ala Ser Pro Ile Pro Glu Arg Lys Lys Ile Ser Lys Glu Lys Glu Glu Glu Arg Lys Glu Phe Arg Ile Arg Gln Tyr Ser Pro Gln Ala Phe Lys Phe Phe Met Glu Gln His Ile Glu Asn Val Ile Lys Ser Tyr Arg Gln Arg Thr Tyr Arg Lys Asn Gln Leu 665 Glu Lys Glu Met His Lys Val Gly Leu Pro Asp Gln Thr Gln Ile Glu 675 Met Arg Lys Met Leu Asn Gln Lys Glu Ser Asn Tyr Ile Arg Leu Lys 695 Arg Ala Lys Met Asp Lys Ser Met Phe Val Lys Leu Lys Pro Ile Gly 705 Val Gly Ala Phe Gly Glu Val Thr Leu Val Ser Lys Ile Asp Thr Ser Asn His Leu Tyr Ala Met Lys Thr Leu Arg Lys Ala Asp Val Leu Lys Arg Asn Gln Val Ala His Val Lys Ala Glu Arg Asp Ile Leu Ala Glu 765 755 760

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Asp Asn Leu Tyr Phe Val Met Asp Tyr Ile Pro Gly Gly Asp Leu Met 785 790 795 800

Ser Leu Leu Ile Lys Leu Gly Ile Phe Glu Glu Glu Leu Ala Arg Phe 805 810 815

Tyr Ile Ala Glu Val Thr Cys Ala Val Asp Ser Val His Lys Met Gly 820 825 830

Phe Ile His Arg Asp Ile Lys Pro Asp Asn Ile Leu Ile Asp Arg Asp 835 840 845

Gly His Ile Lys Leu Thr Asp Phe Gly Leu Cys Thr Gly Phe Arg Trp 850 855 860

Thr His Asn Ser Lys Tyr Tyr Gln Glu Asn Gly Asn His Ser Arg Gln 865 870 875 880

Asp Ser Met Glu Pro Trp Glu Glu Tyr Ser Glu Asn Gly Pro Lys Pro 885 890 895

Thr Val Leu Glu Arg Arg Met Arg Asp His Gln Arg Val Leu Ala 900 905 910

His Ser Leu Val Gly Thr Pro Asn Tyr Ile Ala Pro Glu Val Leu Glu 915 920 925

Arg Ser Gly Tyr Thr Gln Leu Cys Asp Tyr Trp Ser Val Gly Val Ile 930 935 940

Leu Tyr Glu Met Leu Val Gly Gln Pro Pro Phe Leu Ala Asn Ser Pro 945 950 955 960

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Pro Pro Gln Ala Glu Leu Ser Arg Glu Ala Thr Asp Leu Ile Arg Arg 980 985 990

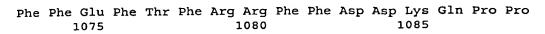
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995 1000 1005

Lys Ser His Asp Phe Phe Lys Gly Ile Asp Phe Ala Asp Met Arg Lys 1010 1015 1020

Gln Lys Ala Pro Tyr Ile Pro Glu Ile Lys His Pro Thr Asp Thr Ser 025 1030 1035 1040

Asn Phe Asp Pro Val Asp Pro Glu Lys Leu Arg Ser Asn Asp Ser Thr 1045 1050 1055

Met Ser Ser Gly Asp Asp Val Asp Gln Asn Asp Arg Thr Phe His Gly
1060 1065 1070



Asp Met Thr Asp Asp Gln Ala Pro Val Tyr Val 1090 1095